Shaped Casting of Copper (Cont.)

air pressure. The text includes a description of the preparation of the charge, the type of furnace and the fuel used. Care is taken to avoid any possible source of moisture as this leads to porosity. Various high-efficiency molds are illustrated and described. No personalities are mentioned. There are no references.

Mayer, V. V., Engineer. Ways of Improving the Quality of Castings from Br. OTsS-3-12-5 Bronze by Melting it in Electric-arc Furnace of IMK Type; Based on the Practice of the Lublin Casting and Mechanical Plant 126

This paper deals with the practice of melting bronzes in a standard arc furnace. The author discusses the problems peculiar to arc furnaces and the various means of controlling the amount of hydrogen, which is the cause of gaseous porosity of metal. He stresses the importance of avoiding impurities which have an adverse effect on the castings, and proceeds to describe the casting regimes used at the above-mentioned plant. No personalities are mentioned. There are no references.

Card 10/17

Zaslavskiy, D. M., Engineer. Lead-Bronze Castings; Practice at the "Krasnyy Fakel" Plant 134

In this paper the author is concerned with lead-bronze castings of parts for pumps operating in fresh and salt water, and in particular with the preparation of molds and cores, especially cores made of cast-iron shavings, sand and a binding agent. These cores are said to reduce porosity in castings and improve their mechanical properties due to good thermal conductivity. The author goes on to discuss various riser systems and gating arrangements to insure good "feeding" of the casting. There are numerous diagrams and drawings showing different molds and cores for casting of lead bronze. Methods of repairing faulty castings, such as electric welding and thermal treatment, are discussed. No personalities are mentioned. There are no references.

Verner, Ye. E., Engineer. Use of Gating System With "Throttle" Arrangement in Bronze Casting; Practice at the Vladimirskiy Tractor Plant 147

Shaped Casting of Copper (Cont.)

The Vladimirskiy Tractor Plant is reported to be using a casting method with a slag-catching arrangement to eliminate slag inclusions in bronze castings. The arrangement consists of a series of retaining chambers in the gating system, where the slag is allowed to accumulate. This arrangement slows down the metal flow, thus facilitating separation of slag from the molten metal. It is reported that this method was introduced in 1945 for casting of bushings and has helped to reduce defects due to slag inclusions from 3.5 to 0.4 per cent. No personalities are mentioned. There are 2 references, both Soviet.

Golomazov, N. A., Engineer. Control of Scabbiness in Casting of Aluminum Bronze by Variable Rate of Metal Flow 150

The author states that the main difficulty in casting of aluminum bronze lies in the formation of oxide film and impurities during the pouring of metal into molds. He claims that this problem has been solved by using a slag chamber to trap the impurities and by varying the rate of metal flow. Pouring of metal is said to start at a slow rate to allow the impurities to collect in the slag chamber and the rate of metal flow is then increased to

Card 12/17

Shaped Casting of Copper (Cont.)

insure proper filling of the mold. In conclusion the author points out that an automatic timing device to control the rate of flow would be desirable. No personalities are mentioned. There are no references.

153

Fomin, B. I. Engineer. Centrifugal Casting of Large Bronze Parts

This paper deals with centrifugal casting of large bronze parts weighing up to 3 tons. According to the author, these casting machines with vertical and horizontal axes of rotation were built at the plant, utilizing verious standard components salvaged from other machines. The most frequent deficiencies in this method of casting are listed as lamination, cracks, distortions, and dimensional inaccuracy. There are sketches showing various molds used in this casting process. In conclusion the author urges specialized design and production of centrifugal casting machines as improvised machines do not give satisfactory performance. No personalities are mentioned. There are no references.

Card 13/17

Shaped Casting of Copper (Cont.)

Soskin, L. M. and Tokarskiy, N. S., Engineers. Manufacture of Copper-Alloy Parts by Compression Molding of Molten Metal (Plant Practice) 156

Compression molding of molten metal is described by the authors as the most efficient method for preparing nonferrous high integrity parts. Compression molding of molten metal is said to be carried out on a 750-ton press with either a vertical or a horizontal plunger. Parts produced by this method are reported to have mechanical properties as good as those produced by forging and to be more economical than coventional casting because no material is wasted for reformed blanks, or risers and gates. The various aspects of compression molding are described and illustrated and there are also numerous photomicrographs showing the uniformly fine-grained structure of compression-molded parts. The text briefly outlines the characteristic equipment used, and an appendix lists safety rules to be observed in compression molding of molten metal. No personalities are mentioned. Thre are no references.

Baradan'yants, V. G., Engineer. Technology of Copper-alloy Casting in Plaster Molds 169

This method of casting is said to be useful only when a small number of castings are to be produced or when design changes are frequent but good dimensional accuracy with high surface quality is desirable. The author describes the accepted

procedure of copper-alloy casting in plaster-of-Paris molds, from the preparation of plaster and mold-making to the cleaning of the finished castings. There are numerous illustrations depicting the various stages of the process. Experiments conducted by VNIIzhelezobeton (All-Union State Scientific Research Institute for Reinforced-concrete Parts and Structures) and VIAM (All-Union Scientific Research Institute of Aviation Materials) are reported to have shown that the permeability of plaster molds to gases may be increased by steaming them prior to baking, which also results in coarser grain, less warping, and reduced shrinkage. No personalities are mentioned. There are no references.

Shklennik, Ya, I., Candidate of Technical Sciences
Bronze Casting by the Lost-wax Process 175

The author regards this casting method as a very economical one, which gives high dimensional accuracy combined with good surface finish. The wax patterns for bushings are said to be made on a specially designed machine with a retractable metal core. Topics discussed include the various methods of multiple and cluster casting as well as some methods of pattern coating and the coating compound used. Soviet personalities mentioned include A. I. Cherkasov, Design Card 15/17

Shaped Casting of Copper (Cont.)

Engineer, V. A. Alekseyev, and P. S. Parshin, There is 1 Soviet reference.

Kolobnev, I. F., Candidate of Technical Sciences and Farbman, S. A., Engineer. Modern Submerged-Resistor Furnaces and Special Features of Copper Alloy Melting Process

The authors claim that the most efficient and modern way of melting copper and copper alloys is by means of a submerged-resistor furnace with closed channels. Advantages listed are simple construction and equipment, small size, high productivity, and low power consumption. Disadvantages are low temperature of slag and high rate of wear of channel lining. The authors stress the need for increased size and higher output of these furnaces and mention as an example a new furnace in Birkenhead, England, with a 15-ton capacity. Some submerged-resistor furnaces are reported to be used in pressure casting. The text contains a full description of operating conditions and some maintenance problems. No personalities are mentioned. There are no feferences.

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Shaped Casting of Copper (Cont.) 509

Vagin, V. V., Engineer.
Melting and Distribution Submerged-resistor Furnace 203

The author notes that two furnaces are used, one for melting and one for distributing, to avoid interruptions in pressure casting or permanent-mold casting. In order to streamline the casting process a new submerged-resistor furnace was developed by I. I. Teslinov, and put into operation at the Elektrovozostroitel'nyy zavod imeni S. M. Budennyy (Electric Locomotive Plant imeni S. M. Budenny) in August 1954. This furnace is portable and can operate where 220-volt current is available. It acts as both melting and distributing furnace and supplies an interrupted flow of molten metal for casting machines. There are no references.

AVAILABLE: Library of Congress

GO/gmp
9-30-58

Card 17/17

LAKISOVA, O.V. (Simferopol')

Significance of hexonium in the pathogenetic treatment of gastric and duodenal ulcer. Vrach. delo no. 3:18-22 Mr '61. (MIRA 14:4)

1. Kafedra diagnostiki vnutrennikh bolezney (zav. - prof. A.B. Shakhnazarov) Krymskogo meditsinskogo instituta.
(PEPTIC ULCER) (AMMONIUM COMPOUNDS)

SHAKHNAZAROV, M. N.; LAKISOVA, O. V.; GARBER, M. M. (Simferopol')

Results of the clinical study of the new Soviet preparation, stafen, for the prevention and treatment of stenocardia. Vrach. delo no.3:143-145 Mr '62. (MIRA 15:7)

1. Kafedra diagnostiki vnutrennikh bolezney (zav. - prof. A. B. Shakhnazarov) i gospital'noy terapii (zav. - prof. P. A. Tepper) lechebnogo fakul'teta Krymskogo meditsinskogo instituta.

(VASODILATORS) (ANGINA PECTORIS)

TEPPER, P.A., prof.; SHAKHNAZAROV, A.B., prof.; KAMENSKIY, A.N., kand.med. nauk; LAKISOVA, O.V.

Hexonium in the treatment of peptic ulcer. Terap.arkh. 33 no.8: 15-22 '61. (MIRA 15:1)

1. Iz gospital'noy terapevticheskoy kliniki (zav. - prof. P.A. Tepper) i kliniki obshchey terapii (zav. - prof. A.B. Shakhazarov) Krymskogo meditsinskogo instituta.
(PEPTIC ULCER) (HEXONIUM)

KATONA, Laszlo, dr.; LAKITS, Elemer, dr.; PALOS, Ferenc, dr.

On the problem of primary resistance. Tuberkulozis 17 no.4:111-114 Ap '64.

1. Szamuely Tibor tbc-gyogyintezet (Budapest) kozlemenye.

TOTH, B.; GECZY, G.; LAKITS, G.; BARSY, G.

Characteristic feathering disorder observed in chickens fed with vitamin D_3 deficient diet. Acta veter Hung 14 no.1:57-62 '64.

1. Phylaxia State Serum Institute (Director: J. Molnar), Budapest, and State Institute of Hygiene (Director: T. Bakacs), Budapest.

LAKIZA, Aleksandr Yakovlevich; KLIMANOV, A.D., otvetstvennyy red.; RYKOV, N.A., red.izd-va; NADEINSKAYA, A.A., tekhn.red.; IL'INSKAYA, G.M., tekhn.red.

[Safety engineering and fire prevention in coal concentration and briquetting plants] Tekhnika bezopasnosti i protivopozharnaia tekhnika na ugleobogatitel'nykh i briketnykh fabrikakh. Moskva, Ugletekhizdat, 1957. 145 p. (MIRA 11:5)
(Coal preparation--Safety measures)
(Fire prevention)

LAKIZA, P.I.

GOL'SHTEYN, I.M., professor; GORYAINOVA, Z.P.; LAKIZA, P.I.

Over-all study of dysentery in Dnepropetrovsk. Gig. i san. 22 no.3: 50-52 Mr '57. (MLRA 10:6)

1. Iz kafedry epidemiologii i kafedry kommunal'noy gigiyeny Dnepropetrovskogo meditsinskogo instituta.
(DYSENTERY, BACILLARY, epidemiol.
in Russia, role of sanitary cond.)

LAKIZA, P.I.

GORYAINOVA, Z.P., kand.med.nauk, STARODUBOVA, T.F., kand.med.nauk.
LAKIZA, P.I., assistent

Role of various environmental factors in the spread of helminthiasis in children's institutions. Gig. i san. 23 no.5:72-75 My '58 (MIRA 11:6)

1. Iz kafedry epidemiologii, kafedry obshchey gigiyeny, kafedry kommunal'noy gigiyeny Dnepropetrovskogo meditsinskogo instituta.
(HELMINTH INFECTIONS, transm.
environmental factors in children's institutions (Rus))

LAKIZA, R.I., inzh.

Replacing bronze facings of propellers shafts. Sudostroenie 24 no. 6:57-58 Je '58. (MIRA 11:8)

(Shafting)

LAKIZA, R. I., Cand of Bio Sci -- (diss) "The influence of factors of internal media on therelationship of male and female flowers of the castor plant." Khar'kov, 1957, 16 pp (Khar'kov Agricultural Institute im V. V. Dokuchayev), (KL, 35-57, 106)

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M-5

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29927

Author : Lakiza, R.I.

Inst : The Novocherkassk Technical Zoological and Veterinary Institute.

Title : The Effect of Damp Soil on the Formation of the Generative Organs in the Castor Plant.

Orig Pub : Tr. Novocherkasskogo zootekhn.-vet. in-ta, 1957, vyp. 10, 141-144.

Abstract : Vegetative trials with Kruglik 5 variety castor plant were made on moist soil at 40, 60 and 80% of full moisture capacity during the whole vegetational period, as well as at these moisture levels in different phases of development. It was determined that the more rapid differentiation of the growth points occurred with abundant moisture

Card 1/2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29927

(80%), whereas inadequate moisture (40%) retards this. The formation of flowers is delayed with surplus moisture in the soil, leading to the later opening of them. The number of blossoms on the bush increased with added moisture. The humidification of the soil during the budding and its fruit-formation were especially significant.

LAKIZA, B.I.

Effect of environmental factors on the manifestation of sex characters in the castor-oil plant. Fiziol. rast. 6 no.4:488-490 Jl-Ag '59. (MIRA 12:10)

1.Kharkov Agricultural Institute.
(Castor-oil plant) (Plants, Sex in)

LAKIZA, R.I.; PEVZNER, N.L.; UGNICH, L.M.

Reparing main and auxiliary diesel generators of whalers by replacing parts. Sudostroenie no.8:58-61 Ag '65. (MIRA 18:9)

21912
S/125/60/000/011/007/016
A161/A133

1.2300 abo 1573

AUTHORS: Dudko, D.A., Lakiza, S.P.

TITLE: New welding possibilities with high-temperature arcs compressed by a gas stream

PERIODICAL: Avtomaticheskaya svarka, no. 11, 1960, 39-48

TEXT: The method is new, and the equipment for welding with compressed arc is just appearing in the USSR and abroad. The arc temperature may be raised to 30,000°C, and such an arc is already being used for cutting. VNIIAVTOGEN has developed and is producing an УДР-2-58 (UDR-2-58) cutter for metal, cutting with a so-called penetrating arc. Its burner nozzle is free of electric current, and the workpiece is the anode of the system. The Institut metallurgii im.Baykova (Institute of Metallurgy im.Baykov) has produced special arc heads ИМЕТ-105 (IMET-105) and ИМЕТ-106 (IMET-106) with discharge inside a protecting stream of argon or another gas shield between a tungsten electrode and a water cooled nozzle (Ref.2, "Svarochnoye proizvodstvo" No.9,

Card 1/6

S/125/60/000/011/007/016
A161/A133

New welding possibilities...

1959, Kulagin and Nikolayev). The Electric Welding Institute im.Ye.O.Paton has experimented with different burners and found that those are to be preferred where the workpiece forms the anode. The burner design is shown (Fig.2); it is suitable for semi-automatic and automatic welding and a wide range of voltage and current (30-450 amp and 20-80 volt). An automatic unit is used on a ТС -17М (TS-17m) "welding tractor". The process is excited by a high-frequency discharge from an oscillator and an auxiliary 20-30 amp arc. Various shielding media have been tried for different metal compositions (argon, helium, nitrogen, hydrogen, natural gas, liquefied natural gas, water steam, alcohol vapors, water gas, carbon dioxide) and all proved applicable. Very low fusion depth was obtained with nitrogen for shielding in welding with copper wire on killed steel (Fig.5), and slightly deeper when the Св -08А (Sv-08A) wire was fused on killed Ст.3 (St.3) steel in carbon dioxide (Fig.6). Better mechanical properties appeard in weld metal produced with Св -08Г2А (Sv-08G2SA) wire in carbon dioxide. Welding with two passes using 1.2 mm filler wire for the second pass in argon on 30ХГСА (30KhGSA) steel resulted in quality seams and good weld metal. A particular feature of the process is that a wide reinforcement bead can be produced at very shallow fusion of the base metal. Splatter was completely absent in argon, carbon dioxide and wa-

S/125/60/000/011/007/016
A161/A133

New welding possibilities...

ter steam. The weld surface was extraordinarily smooth. The arc length need not be accurately maintained as in common argon arc welding, and the arc stability was not affected by the travel speed of 7200 m/hr. The compressed arc may be given any desired shape - round, oval, rectangular or other by using different nozzle shapes or magnetic fields. A flat fan-shaped arc has been formed with magnetic field of 50 cycles (Fig.11,a); the arc may be rotated by a travelling magnetic field (Fig.11,b) forming a cone (handy for welding on pipes). In submerged arc processes the gas did not blow away the flux. The consumption of shielding gas is very low, between 0.2 and 5 liter/min. There are 12 figures and 4 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.Ye. O.Patona AN USSR ("Order of the Red Banner of Labor" Electric Welding Institute im.Ye.O.Paton of the Academy of Sciences of the Ukrainskaya SSR)

SUBMITTED: July 6, 1960

80822

S/125/60/000/06/02/007

18.7200

AUTHORS: Dudko, D.A., and Lakiza, S.P.

TITLE: Automatic Welding of Annular Seams with Very Small Diameter by Cone Arc

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 6, pp 42 - 45

TEXT: No special automatics existing for shielded arc welding [Ref. 1] of small annular work pieces use carbon or tungsten electrodes, nor could thin welding rods [Ref. 2] be used for the special case described, in which work piece shown in Figure 1 had to be welded. The diameter was less than 5 mm, with wall of stainless steel thinner than 0.5 mm. The joint had to be mechanically strong and vacuum-tight; the welding metal was not to protrude more than 0.05 mm to the outside, and the central point of the work piece was to be heated not over 300°C in the welding process. After failure with existing equipment, it was decided to use the "cone arc" method which was previously used for the first time for welding small-diameter tubes of magnesium alloy to grids [Ref. 3], i.e. by an inclined arc being rotated at high speed through the effect of a magnetic field. The optimum process parameters were found by trial-and-error: "BT-7" (VT-7) tungsten electrode of 1.6 mm diameter; argon for shielding, in quantity of 10

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Automatic Welding of Annular Seams with Very Small Diameter by Cone Arc

liter/min; current of 45 amp and 10 volt; arc burning duration between 0.2 and 0.3 sec; 0.5 mm gap between the edges of the work piece and the electrode tip; 25 mm free electrode end length. Solid and smooth welds were obtained (Photo, Figure 3). No marked difference of microstructure between the base and the welding metal was observed (Photo, Figure 4). Welding of larger work pieces, of 15 mm diameter and more, had also been tried with a solid and a tubular electrode, as shown in diagram (Figure 5), but only stronger current (of over 150 amp) gave a stable process, which is too high for welding thin metal. It is supposed that common commercial tungsten used for the electrode was the cause of the unstable welding process with weak current. Water cooled copper electrodes gave analogous results. It is concluded that the "cone arc" method (i.e. by an arc rotating in a magnetic field) is worth further study on development of machine welding technology for connecting tubes with tube grids, or similar work. There are 5 figures and 5 references, 4 of which are Soviet and 1 English.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.Ye.O. Patona AN USSR (Red Banner of Labor Electric Welding Institute imeni Ye.O.Paton AS UkrSSR)

SUBMITTED: February 4, 1960

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22954

S/125/61/000/007/010/033
D040/D113

12300

AUTHORS: Dudko, D.A. and Lakiza, S.P.

TITLE: Welding 1Kh18N9T thin sheet steel by the pinched arc method

PERIODICAL: Avtomaticheskaya svarka, 14 no. 7, 1961, 86-87

TEXT: Argon arc welding with a tungsten electrode is at the moment the most universal method of welding high-alloy sheet steel, but argon is scarce and expensive. According to available data, 3-4 liters argon per minute are required for butt welding 1 mm thick 1Kh18N9T (1Kh18N9T) steel without filler metal. The Institut elektrosvarki im. Ye.O. Patona (Electric Welding Institute im. Ye.O.Paton) has developed a new automatic pinched arc welding process which requires only 0.3 to about 0.5 liters of argon per min in welding 1Kh18N9T sheet steel. The "A-730" welding torch designed at the Institute can weld 1, 1.5 and 2 mm thick sheets. Welding is conducted using d.c. of direct polarity. The high quality of welds is shown in two photographs of a seam in a 1 mm sheet welded without filler metal and support, with 65 amp, 22 volts and 40 m/hr welding speed. The welded joints have the same strength as the base metal, they do not break when bent at an angle of 180° and have

Card 1/2

Welding 1Kh18N9T thin sheet .....

sufficient resistance against intercrystalline corrosion. The arc length can be more widely varied than is possible in conventional argon arc welding. There are 2 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet bloc. The reference to the English-language publications reads as follows: J.C. Borland, W.G. Hull, Manual Open Air Welding of Reactive Metals, "British Welding Journal", p 427-434, No. 9, 1958.

Card 2/2

S/125/62/000/001/010/011
D036/D113

AUTHOR: Lakiza, S.P.

TITLE: Which types of welds can be made with a plasma arc, and what equipment is required for this purpose?

PERIODICAL: Avtomaticheskaya svarka, 15- no. 1, 1962, 90

TEXT: The above question was put to the author by some welders. The author's reply is as follows: Use of the plasma arc at the present time is expedient for the automatic welding of thin sheets of metals and alloys. Structures from 0.8.-1.5 mm thick metal are butt-welded, flange-welded or spot-welded without using filler material. Metal, 2-3 mm thick is butt-welded in one pass with filler material, or joined by a double-sided weld without filler material. The plasma-arc technology is economical. Argon consumption during the welding of stainless steel is 0.3-0.5 l/min. The plasma arc can also be used for surfacing by melting the material deposited on the area to be surfaced. For plasma-arc welding and surfacing, the Institut elektrosvarki (Electric Welding Institute) developed a special A -759 (A-759)-type torch which may be used with any automatic argon-arc welder for tungsten welding . In the

Card 1/2

S/125/62/000/001/010/011
D036/D113

Which types of welds ...

first quarter of 1962, the Institute will produce a trial batch of A-759 torches with the auxiliary electric equipment. They will be supplied to organizations upon request. [Abstracter's note: Complete translation].

Card 2/2

L 2764-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5021623 UR/0286/65/000/013/0103/0103
621.791.89

AUTHOR: Dudko, D. A.; Lakiza, S. P.

TITLE: Method of creating a plasma arc in vacuum. Class 49, No. 172608

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 103

TOPIC TAGS: plasma arc, vacuum plasma arc, plasma arc heat regulation

ABSTRACT: An Author Certificate has been issued for a method of creating a plasma jet in vacuum by feeding a plasma-forming gas into the arc zone. To control the heat concentration on the part being heated, the flow rate of the plasma-forming gas is varied, thus widening or narrowing the arc column at the anode spot. In a modification of the method, the arc column at the anode spot is widened or narrowed by a respective increase or decrease of the flow rate. [MS]

ASSOCIATION: Institut elektrosvarki im. Ye. O. Patona Akademii nauk UkrSSR (Electric Welding Institute, Academy of Sciences, UkrSSR)

SUBMITTED: 25Nov63 ENCL: 00 SUB CODE: ME

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4103

Card 1/1

ACC NR: AP7002998 (A,N) SOURCE CODE: UR/0413/66/000/024/0103/0103

INVENTOR: Dudko, D.A.; Lakiza, S.P.; Azbukin, V.D.

ORG: none

TITLE: Plasma torch. Class 49, No. 189669 [Electric Welding Institute im. E.O. Paton (Institut elektorsvarki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 103

TOPIC TAGS: plasma, plasma treatment, plasma torch SPRAYING, PLASMA DEVICE

ABSTRACT:

This Author Certificate introduces a plasma torch for treatment of materials. The torch consists of a housing containing a cathode and a nozzle-anode, and an electromagnetic system for controlling the plasma jet. To provide uniform heating of the treated article, the cathode is made in the shape of a ring mounted in the housing, and the nozzle is made out of two concentric sleeves whose cross section corresponds to that of the treated article. [TD]

SUB CODE: 13, 20/ SUBM DATE: 22Mar65/ ATD PRESS: 5115

Card 1/1 UDC: 621.791.755.034

ACC NR: AP7004793 SOURCE CODE: UR/0413/67/000/001/0128/0128

INVENTOR: Dudko, D. A.; Lakiza, S. P.; Bosyy, A. V.

ORG: none

TITLE: Plasma gun for metals. Class 49, No. 190186 [announced by the Electric Welding Institute, im. Ye. O. Paton (Institut elektrosvarki)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 128

TOPIC TAGS: plasma gun, ~~low pressure plasma gun~~ metalworking machinery

ABSTRACT:
This Author Certificate introduces a plasma gun for treating metals in vacuum with a low pressure constricted arc. The gun (see Fig. 1) includes a housing, a cathode subassembly, and a nozzle, insulator, and vacuum fitting.

Card 1/3 UDC: 621.791.755.03

ACC NR: AP7004793

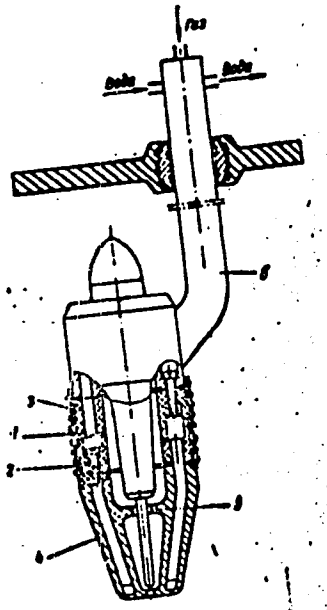

Fig. 1. Plasma gun

1 - Insulator; 2 - screen; 3 - water coolant ducts; 4 - nozzle; 5 - screen baffle; 6 - vacuum fitting.

Card 2/3

ACC NR: AP7004793

To proiong the service life and simplify the operation of the gun, the insulator is equipped with an exchangeable protective screen and is water cooled. The nozzle has a baffle and an exchangeable refractory-metal ingert. The vacuum fitting is mounted eccentrically to the gun body. Orig. art. has: 1 figure. [ND]

SUB CODE: 20,13/ SUBM DATE: 07Jan66/ ATD PRESS: 5117

Card 3/3

LAKIZA, V.L. (Odessa)

Some characteristics of the course of liver cirrhosis in young people.
Sov.med. 25 no.1:65-68 Ja '62. (MIRA 15:4)
(LIVER--CIRRHOSIS)

17(10) SOV/177-58-4-5/32

AUTHOR: Lakiza, V.L., Colonel of the Medical Corps

TITLE: Diagnosis and Clinical Treatment of Ulceration in Young Persons (O diagnostike i klinike yazvennoy bolezni u lits molodogo vozrasta)

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 4, pp 17-20 (USSR)

ABSTRACT: The article is based on observations of 1,454 soldiers suffering from ulceration (duodenal ulcer in 84.8% and gastric ulcer in 15.2% of the cases). The author thinks that X-ray examination of the gastro-intestinal tract is one of the most important factors in the diagnosis of uncomplicated ulceration in young persons. It has been proved that ulceration develops from functional stomach disorder, called by M.P. Konchalovskiy "Prelude to the Ulcer". The classical triad of clinical symptoms such as pain, emesis and hemorrhage were observed only in complicated ulceration. During the summer period,

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Diagnosis and Clinical Treatment of Ulceration in Young Persons

only a few patients were hospitalized. From September to May the numberrose . G.I. Burchinskiy concluded that the seasonal prevalence of the exacerbation of disease reflects in a certain degree on the irregularity of hospitalization in the course of a year. The author indicates that nearly all patients suffering from perforated ulcer did not consult a physician before their hospitalization. Only a few patients suffered from pain in the abdomen and dyspeptic disturbances. This fact points to the presence of so-called "dumb ulcers" with a latent course. The author sums up his observations by stating that the clinical picture of ulceration in young patients is to be determined by stage and form of the disease, morphological changes on the part of the stomach and the duodenum. Early diagnosis of ulceration in young patients is rather difficult. It must be based on the whole complex of clinical symptoms,

Diagnosis and Clinical Treatment of Ulceration in Young Persons

on a carefully compiled physician's report with an analysis of eventual etiological factors, as well as on the data of X-ray and laboratory examinations. There is 1 table and 2 Soviet references.

LAKIZA, V.L., polkovnik meditsinskoy sluzhby

Clinical aspects, diagnosis, and treatment of giardiasis. Voen.-med.zhur. no.4:83 Ap '60. (MIRA 14:1)
(GIARDIASIS)

LAKIZA, Ye.N.

Spring plants of the Transcarpathian flora. Biul.Glav.bot.sada no.16: 95-96 '53. (MLRA 7:4)

1. Botanicheskiy sad Uzhgorodskogo Gosudarstvennogo universiteta.
(Transcarpathia--Botany) (Botany--Transcarpathia)

JANCSO, Tibor, okleveles vegyeszmernok; LAKLIA, Tibor, okleveles vegyeszmernok; PETO, Edit, dr., okleveles kozgazdasz; SCHILL, Ottmar, okleveles gepeszmernok; SIPOTZ, Istvan, dr., okleveles kozgazdasz; TURKOVICS, Gyorgy, okleveles banyamernok

General economic aspects of transporting crude oils, oil products and natural gas through pipelines. Bany lap. 97 no.9:626-634 S '64.

1. Petroleum and Gas Industry Planning Enterprise, Budapest.

L 08496-67 EWT(1)
ACC NR: AP6034231 SOURCE CODE: UR/0120/66/000/005/0134/0135

AUTHOR: Yefimchik, M. K.; Izokh, V. V.; Lakizo, V. I.; Podol'nyy, E. I.; Chernyavskiy, A. F.

ORG: Belorussian State University, Minsk (Belorusskiy gosudarstvennyy universitet) 53 B

TITLE: High-speed scaling circuit with tunnel diodes 75

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1966, 134-135

TOPIC TAGS: computer component, scaling circuit, tunnel diode, circuit design

ABSTRACT: A binary scaling circuit using three tunnel diodes (see Fig. 1) is investigated. It is largely free from the deficiencies characteristic of the widely

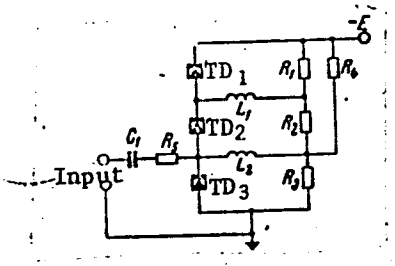

Fig. 1. Circuit diagram of a scaler with three tunnel diodes

Card 1/3 UDC: 621.374.32:621.382

used bridge-type scaling circuit with two tunnel diodes, which is sensitive to pulses of both polarities and has a tendency to shift the working point of the tunnel diode characteristic. The TD_1 and TD_2 diodes shown in Fig. 1, together with their resistances R_1 and R_2 and the inductance L_1, form a flip-flop circuit. The third tunnel diode TD_3, with its resistance R_3 and inductance L_2, forms a monostable multivibrator. Fig. 2. represents the volt-ampere characteristics of the whole system. Curve I

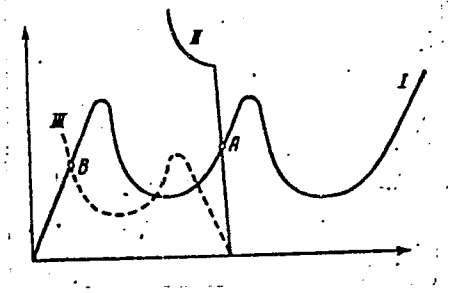

Fig. 2. Selection of operating conditions of the scaler shown in Fig. 1

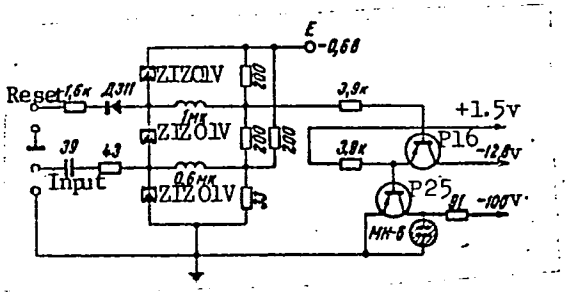

Fig. 3. Circuit diagram of a binary scaler with a neon lamp indicator

indicates the static volt-ampere characteristics of the flip-flop; curve II, the static load characteristic; and curve III, the dynamic load characteristic. R_L regulates circuit sensitivity. It can be seen from Fig. 2 that the circuit is sensitive to pulses of positive polarity only as its d-c load characteristic is sufficiently steep, which results in a considerable extension of the dynamic range of this circuit. There is no need for the rigid power source stabilization necessary in the two-diode system. Fig. 3 represents a practical circuit diagram of a scaler equipped with three ZIZOlV tunnel diodes. This scaler operates stably even with no parameter identity of TD_1 and TD_2, with the input signal frequency up to 100 Mc, and with supply voltage fluctuations of ±25%. Orig. art. has: 6 figures.

SUB CODE: 09/ SUBM DATE: 11Sep65/ ORIG REF: 001/ OTH REF: 001/ ATD PRESS: 5103

LAKMAN, S. L.

Concerning the Organization of Work for Lady Foreman. Leka Promishlenost (Light Industry), #11:42:Nov. 1955

H.

HUNGARY/Chemical Technology - Chemical Products and Their Applications - Perfumes, Essential Oils and Cosmetics.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37351

Author : Lakner, A.
Inst : -
Title : Some Problems Connected with the Manufacturing of Perfumes in Hungary.

Orig Pub : Olaj, Szappan, Kozmetika, 1955, September-October, 11-12.

Abstract : No abstract.

Card 1/1

LAKNER, Edo

Treatment of burns at the hospital during 1950-54 with special reference to prevention of infection of the injured tissue. Zdrav. vest., Ljubljana 24 no.3:93-95 1955.

1. Kirurgicni oddelek bolnisnice v Celju - predstojnik prim. Dr. Zv. Susteresic.
(BURNS, therapy,
hosp. report)

15.8000 82349 G/004/60/007/008/003/005
B015/B055

AUTHORS: Dobó, J., Somogyi, A., Lakner, E.

TITLE: Preparation of Colorable Polytetrafluoro Ethylene (PTFE) Using Radiation-initiated Graft Polymerization

PERIODICAL: Plaste und Kautschuk, 1960, Vol. 7, No. 8, pp. 393 - 395

TEXT: The grafting of styrene on PTFE (Teflon) has already been investigated by Chapiro (Ref. 1). Restaino (Refs. 2,3) investigated the grafting of other polymers on the same material. For this, PTFE was dipped into the monomer, the polymer and the monomer then being exposed simultaneously to high-energy radiation. Sinitsina et al. (Ref. 4) applied a different method. In the present paper, the first-mentioned method was used. The authors used a 220 kv, 15 ma X-ray apparatus, or in some cases, a 60 curie Co^{60} source. Styrene, methyl methacrylate, vinyl acetate, and vinyl pyridine were used as monomers. Irradiation was carried out in the absence of oxygen. Vinyl acetate was grafted most easily. Grafting on PTFE is accompanied by autoacceleration, i.e. the reaction rate increases with

Card 1/2

time (Fig. 1). In general, acetate dyes were found to be most suitable for coloring graft polymers (Table 1, Fig. 3), the choice of dye, however, depending on the type of grafted polymer (Table 2, coloring conditions for vinyl acetate copolymers). Investigation data show that well colorable PTFE sheeting can be prepared by radiation-initiated grafting, without appreciable damage to the mechanical properties of the sheeting, provided the grafted polymer coating is thin (Tables 3, 4). The color gives an idea of the distribution of colorable grafted components in the sheeting. At room temperature and medium intensities, grafting on PTFE is a surface grafting. There are 3 figures, 4 tables, and 6 references: 1 Soviet, 3 US, 1 British, and 1 French.

ASSOCIATION: Forschungsinstitut der Organisch-chemischen und Kunststoff-industrie, Budapest (Ungarn) (Research Institute of the Organic Chemical- and Plastics Industries, Budapest (Hungary))

H/005/61/000/002/002/002
B124/B203

AUTHORS: Dobó, János, Somogyi, Ágnes, and Lakner, Endre

TITLE: Production of dye-absorbent Teflon by radiation-chemical graft copolymerization

PERIODICAL: Magyar Kémiai Folyóirat, no. 2, 1961, 85-90

TEXT: The grafting of styrene on Teflon was studied by A. Chapiro (Ref. 1: J. Polymer Sci., 34, 481, 1959), and that of other monomers on Teflon by A. J. Restaino (Ref. 2: Harwood: Effects of Radiation on Materials, Reinhold, New York, 1958, Chapt. XI; Ref. 3: A. J. Restaino and W. N. Reed: J. Pol. Sci., 36, 499, 1959); in the latter case, graft copolymerization and homopolymerization occurred at the same time. Ts. A. Sinitsyna, I. D. Tsvetkov, G. S. Bagdasaryan, and V. Voyevodskiy (Ref. 4: Dokl. Akad. Nauk, 129, 631, 1959) were the first to irradiate Teflon and immerse it into the monomer; thus, long-lived free radicals were formed on Teflon, and graft copolymerization of the monomer was initiated. A communication by the Radiation Application Co. (Ref. 5: Chem. Eng. News: 37/5, 44, 1959) mentions a procedure of radiation-chemical graft copolymerization

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H/005/61/000/002/002/002
B124/B203

Production of dye-absorbent Teflon by ...

for the production of dye-absorbent Teflon without describing it in detail. Polymer and monomer were simultaneously irradiated by a 220-kv and 15-ma X-ray apparatus, in some cases by a Co^{60} radiation gun with an activity of 60 curie, with exclusion of oxygen. Results obtained are described in Ref. 6 (J. Dobó, Á. Somogyi: Journ. chim. Phys., 56, 863, 1959). Monomers used were styrene, methyl methacrylate (MMA), vinyl acetate (VAC), and vinyl pyridine (VP). To attain a given degree of grafting, the radiation dose required rises in the order: VAC, MMA, VP, styrene (Fig. 1). VP copolymers can be best stained with acid and acetate dyes, MMA copolymers worse, and sulfonated styrene copolymers worst. Thus, the use of VAC is most convenient. Grafting on Teflon is connected with auto-acceleration increasing with time (Fig. 2). The initial grafting rate is approximately proportional to the square root of the radiation intensity; grafting is accelerated by a temperature increase. Table 1 gives a survey of the dyeing of grafted copolymers; the data were obtained in a dyestuff bath within 1 hr and at 100°C, a 2% aqueous dyestuff solution, a 1% emulsifier solution, and benzene being used as carriers. Under these conditions, ungrafted foils were not stained at all. Slightly (below 2%) grafted foils were stained irregularly due to irregular grafting. Uniform,

Card 2/12

Production of dye-absorbent Teflon by ...

well-dyed foils were obtained by a 6-10% grafting with VAC, for example (Table 2). The penetration depth of dyes into the polymer foil is independent of diffusion, and represents the distribution of grafted polymer in the foil. The mechanical properties of Teflon deteriorate only slightly under the action of radiation (Table 3). The thermal stability of the dye depends on the grafted polymer and the dyestuff quality; with certain combinations, thermal stability is very high (Table 4). Grafting of Teflon proceeds at room temperature and medium intensities in the surface layer. János Mikes is thanked for assisting in photographing the microscopic sections. There are 3 figures, 4 tables, and 6 references: 2 Soviet-bloc and 4 non-Soviet-bloc. The three references to English-language publications read as follows: A. J. Restaino in "Harwood": Effects of Radiation on Materials, Reinhold New York, 1958, Chapt. XI.; A. J. Restaino and W. H. Reed: J. Pol. Sci., 36, 499, 1959; Chem. Eng. News: 37/5, 44, 1959.

ASSOCIATION: Budapest, Szerves Vegyipari és Müanyagipari Kutató Intézet (Budapest Research Institute of the Organic Chemical Industry and Plastics Industry)

Card 3/12

DOBO, Janos; SOMOGYI, Agnes; LAHNER, Endre

Synthesis of colorable teflon by means of radiation copolimerization. Magy kem folyoir 67 no.2:85-90 F '62.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet, Budapest.

LAKNER, K.

Knowledge of the retting process based on chemical and physicochemical research.

p. 457.
Vol 17, no. 3/4, 1955. KOZLEMENYEI. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

LAKNER, L.; GONDZIK, M.

Treatment of mouth and mandibular diseases by chemically preserved amnion. Polski tygod. lek 7 no. 41:1281-1283 13 Oct 1952. (CIML 24:1)

1. Of the Institute of Surgery (Head--Prof. Leon Lakner, M.D.) of the Stomatological Polyclinic of Poznan Medical Academy.

LAKO, Laszlo

"Matter and motion; data on the dialectics of chemical phenomena" by Tibor Erdey-Gruz. Reviewed by Laszlo Lako. Magy kem folyoir 69 no.10:469-470 O '63.

LAKO, M.

"Technical and economic indicators of steam boilers and the system of constant operation."

p. 15 (Teknika) Vol. 4, no. 5, Sept./Oct. 1957
Tirane, Albania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

LAKO, M.

"Constant corrosion and need of preservation of boilers."

p.9 (Teknika, Vol. 5, no. 1, Jan./Feb. 1958, Tirane, Albania)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

LAKO, M.

TECHNOLOGY

PERIODICALS TEKNIKA , VOL. 5, Sept./ Oct. 1958

Lako, M. The use of naphtha products as an economic fuel in the operation of boilers. p. 12.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 5, May 1959, Unclass.

LAKO, Sandor; LIGETI, Istvan; PAL, Illes

Experimental constructions in the service of the 15-year housing development plan. Magy ep ip 10 no.2:71-75 '61.

Lakocy, A.

COUNTRY : POLAND
CATEGORY : General and Specialized Zoology. Insects. Harmful insects and Mites
ABS. JOUR. : RZhBiol., No. 22 1958, No. [illegible]

AUTHOR : Lakocy, A.
INST. : -
TITLE : Study of the Influence of Feeding of Larvae of the Colorado Potato Beetle on Leaves of Different Varieties of Potato Sown at Different Times on Physiologic State

ORIG. PUB. : Roczn. Nauk Rolniczych, 1957, A74, No. 1, 151-[illegible]

ABSTRACT : Potatoes of the Pervesnok, Semino, Sur, and Pirner varieties were sown in March, April and June. The leaves of potatoes of each type were fed to 200 larvae each from the moment of hatching until migration of the beetles into the soil. During the period of feeding the larvae, the leaves of the potatoes and the beetles emergent from the soil were analyzed for water content, fat, protein nitrogen, and lipocytic coefficient (LC). The variety of potato influences neither the LC nor the water content of the beetles. The lowest LC indices, water content, and body weight were seen in beetles feeding in the larval stage on leaves of potatoes plan-

CARD: 1/2

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1958, No.

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : ted in April (when compared with those planted at other times). These indices changed when the larvae were fed on leaves of other potatoes. Consequently, the LC and the water content in the potato leaves did not influence those same elements in the beetles. Upon cultivation of beetles for physiologic and toxicologic purposes, one may use beetles regardless of the character of the larval nutrition. The greater weight of females in comparison with males is explained by the increased body water. -- From author's summary.

CARD: 2/2

17

LAKOCY, A.

LAKOCY, A.

COUNTRY : Poland
CATEGORY : Cultivated Plants. General Problems.

ABS. JOUR.: Ref Zhur -Biologiya, No. 5, 1959, No. 20189

Author : Lakocy, A.
INST. : ---
TITLE : Effect of Chlordane and Benzene Hexachloride Productivity of Cultivated Plants.

ORIG. PUB.: Roczn. nauk rolniczych, 1957, A74, No.2, 460-466

ABSTRACT : Experiments were conducted on the fields of the department studying Colorado potato beetle control in Poznan. Chlordane in doses of 500, 375, and 250 kg/ha had no effect on the yields of spring rye, lupine, and potatoes. The mean dose alone showed an increase of yield in oats. BHC in doses of 400, 300, and 200 kg/ha lowered the yield of rye. With doses of 400 and 200 kg/ha the yield of lupine showed a definite gain. -- Z.I. Zhurbitskiy

CARD :

ZAKOCY A.

COUNTRY : POLAND
CATEGORY : General and Specialized Zoology. Insects. P
Harmful Insects and Acarids.
ABS. JOUR. : RZhBiol., No.23, 1958, No.105282

AUTHOR : Stachorska, B., Lakocy, A., Szczepanska, A.
INST. : -
TITLE : Studies on the Susceptibility of Colorado Potato Beetle to Poisons in Relation to the Physiological Condition.

ORIG. PUB. : Roczn. nauk rolniczych, 1957, A74, No. 2, 463-569

ABSTRACT : Experiments in dusting with "gezarol'" (DDT preparation) and spraying with arsenate of Ca the wintered and summer beetles (B). Unfed B perished completely with the expenditure of "gezarol'" at the rate of 40 kg/ha for the wintered and 20 kg/ha for the summer B. After feeding for 2 weeks, the susceptibility of the B to DDT declines, and it is still less in B which are ready for wintering, especially in females that were not laying eggs. Upon spraying with calcium arsenate (4 kg/ha), mortality of wintered B did not exceed 90%, and in B of the summer generation, it reached 94%; mortality declined sharply in the feeding B.--D. P. Dovnar-Zapol'skiy

Card: 1/1

FOYGEL'MAN, L. [Foihel'man, L.], inzh.; LAKODEY, F., inzh.

Attachment to the SK-3 combine for picking up chaff. Mekh. sil'. hosp. 12 no. 5:18 My '61. (MIRA 14:5)
(Combines (Agricultural machinery))

LAKOMA, MARIA

(10)

Warsaw, Przegląd Geodezyjny, Vol 34, No 1, January 1952.

1. "Ten Years of Work of the National Establishment of Cartographic Publications (PPWK, Państwowe Przedsiębiorstwo Wydawnictw Kartograficznych)," Jan REMBOWSKI; pp 1-4.
2. "About Tourists' Maps Published by PPWK in 1937-1951," Stanisław Janusz TYNOWSKI; pp 4-10.
3. "Tourists' Map of the Masury Lakes," Maria LAKOMA; pp 10-11.
4. "Remarks on the Standardization of Surveyors' Sale-ries," Władysław PLOSKI; pp 12-13.
5. "On Better Quality First Outlines of Matrix and Large-Scale Maps," Stanisław KOLANOWSKI; pp 13-16.
6. "Simplifying Computation of Certain Typical Triangulation Nets," Witold ŁUCZEWICZ; pp 16-18.
7. "Triangulation Net of the City of Krakow," Ludwik STYPIŃSKI; pp 18-21.
8. "Autoreducing Tachometer Pahlo-020 with Plane Table Kartl-250," Stanisław CHABAJ; pp 21-24.
9. "Remarks on Technical Polygonation for Agricultural Purposes," Janusz PIETRZYKI; pp 24-25.
10. "More on Geodetic Nets in Agricultural Surveys," Andrzej WOLFSWICZ; pp 25-26.
11. "Organization of Surveying for Housing in Prague," Josef SCHANTA of O. Z. (Prague, Czechoslovakia) and Josef ŠIMEK of VOK (Prague) (Translated by W. KOPLOWICZ); pp 26-27.

1107

— 1/1 —

LAKOMKIN, A.I.

Method of registering the activity of the cardiovascular system in chronic experiments. Fiziol. zhur. 41 no.6:832-834 N-D '55. (MLRA 9:3)

1. Kafedra fiziologii cheloveka i zhivotnykh Voronezhskogo universiteta.

(CARDIOVASCULAR SYSTEM, physiology,
appar. for simultaneous registration of various funct.)

Q-3

USSR/Farm Animals. Small Horned Cattle

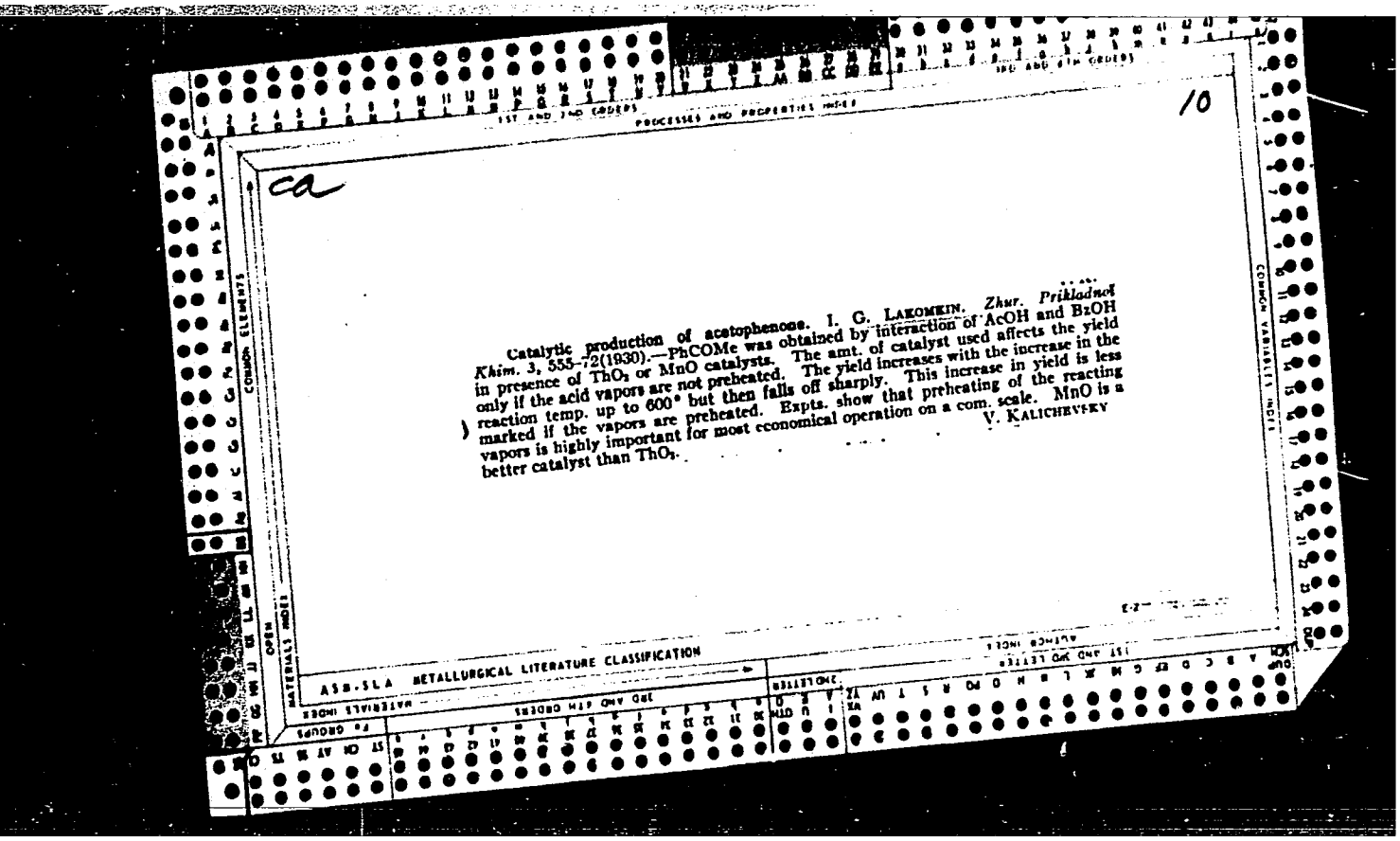
Abs Jour : Ref Zhur - Biol., No 11, 1958, No 50008

Author : Lekonkin A.I., Lebedev V.V.
Inst : Voronezh University, Society for Natural Study
Title : One Method Investigating the Drinking Reactions in Large Horned Cattle.

Orig Pub : Byul. O-va yestestvoi pyt. pri Voronezhsk. un-te, 1956, 10, 103-105

Abstract : An installation is proposed which utilizes an automatic water dispenser with several modifications. This installation permits to study the drinking reactions in animals, to compute the amounts of water which they consume at various feedings and various keeping conditions. Also, it permits to observe speed and characteristics of the participating drinking reflex.

Card : 1/1



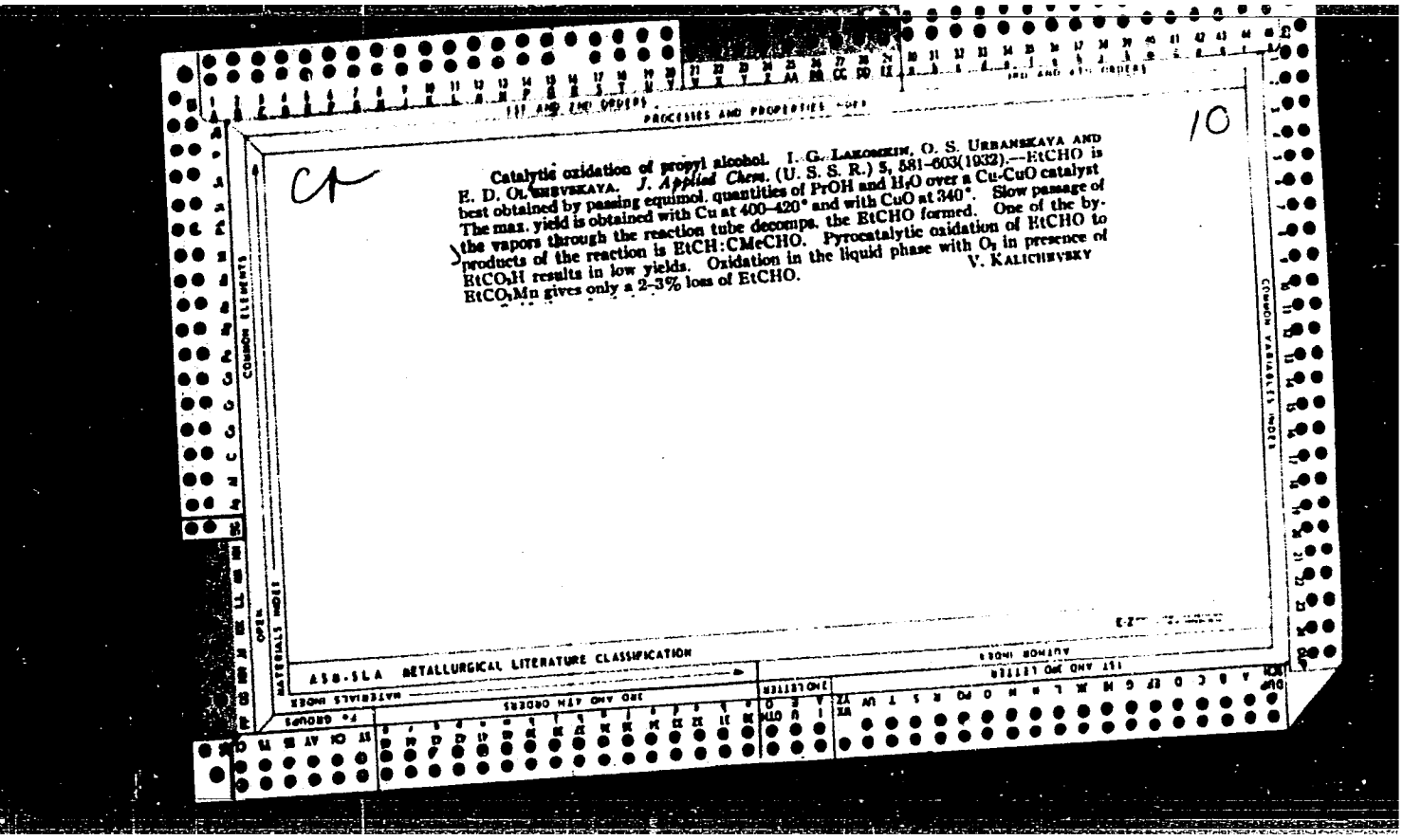
10

ca

Catalytic production of acetophenone. I. G. Lakomkin. *Zhur. Prikladnoi Khim.* 3, 555–72(1930).—PhCOMe was obtained by interaction of AcOH and BzOH in presence of ThO_2 or MnO catalysts. The amt. of catalyst used affects the yield only if the acid vapors are not preheated. The yield increases with the increase in the reaction temp. up to 600° but then falls off sharply. This increase in yield is less marked if the vapors are preheated. Expts. show that preheating of the reacting vapors is highly important for most economical operation on a com. scale. MnO is a better catalyst than ThO_2.

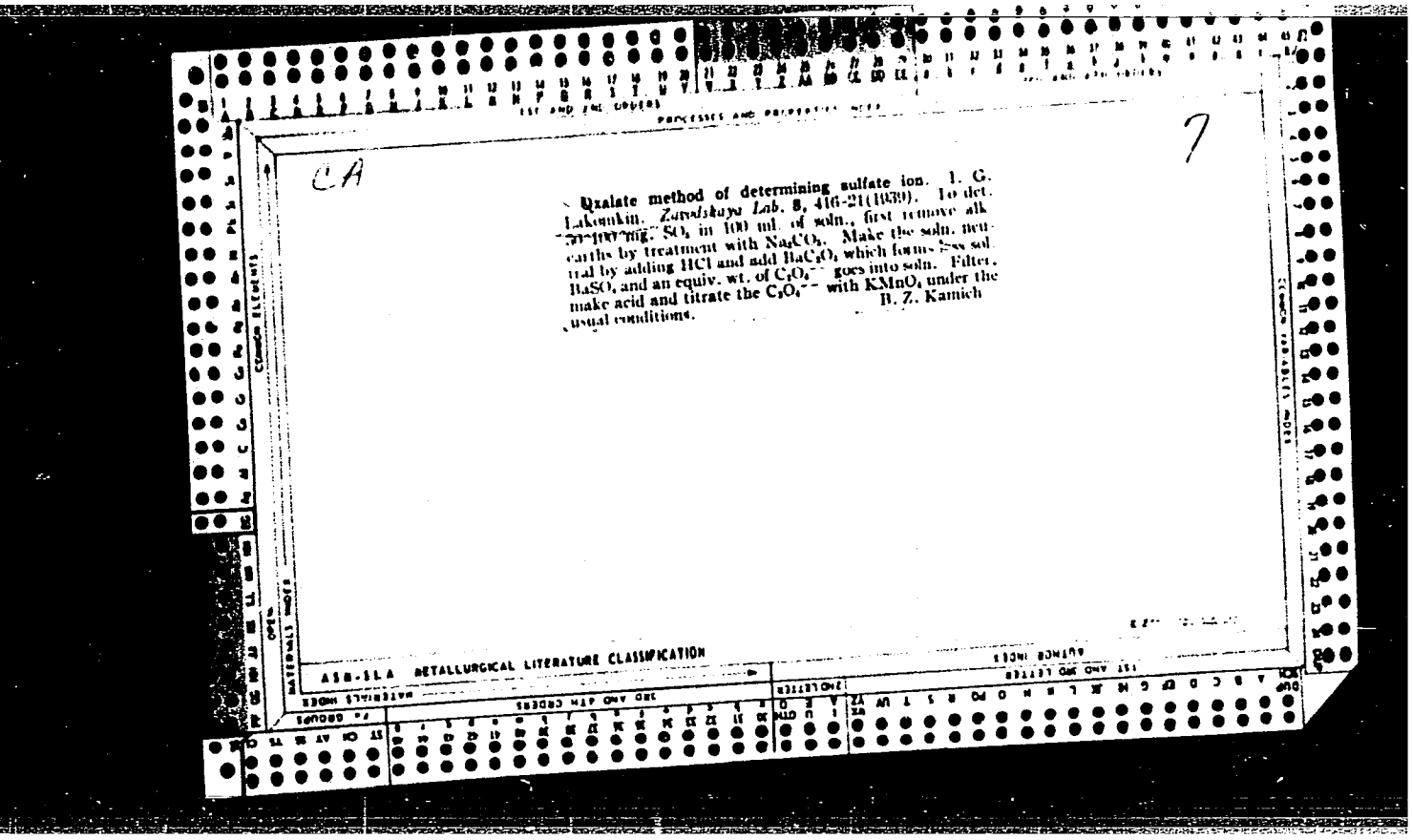
V. Kalichevsky

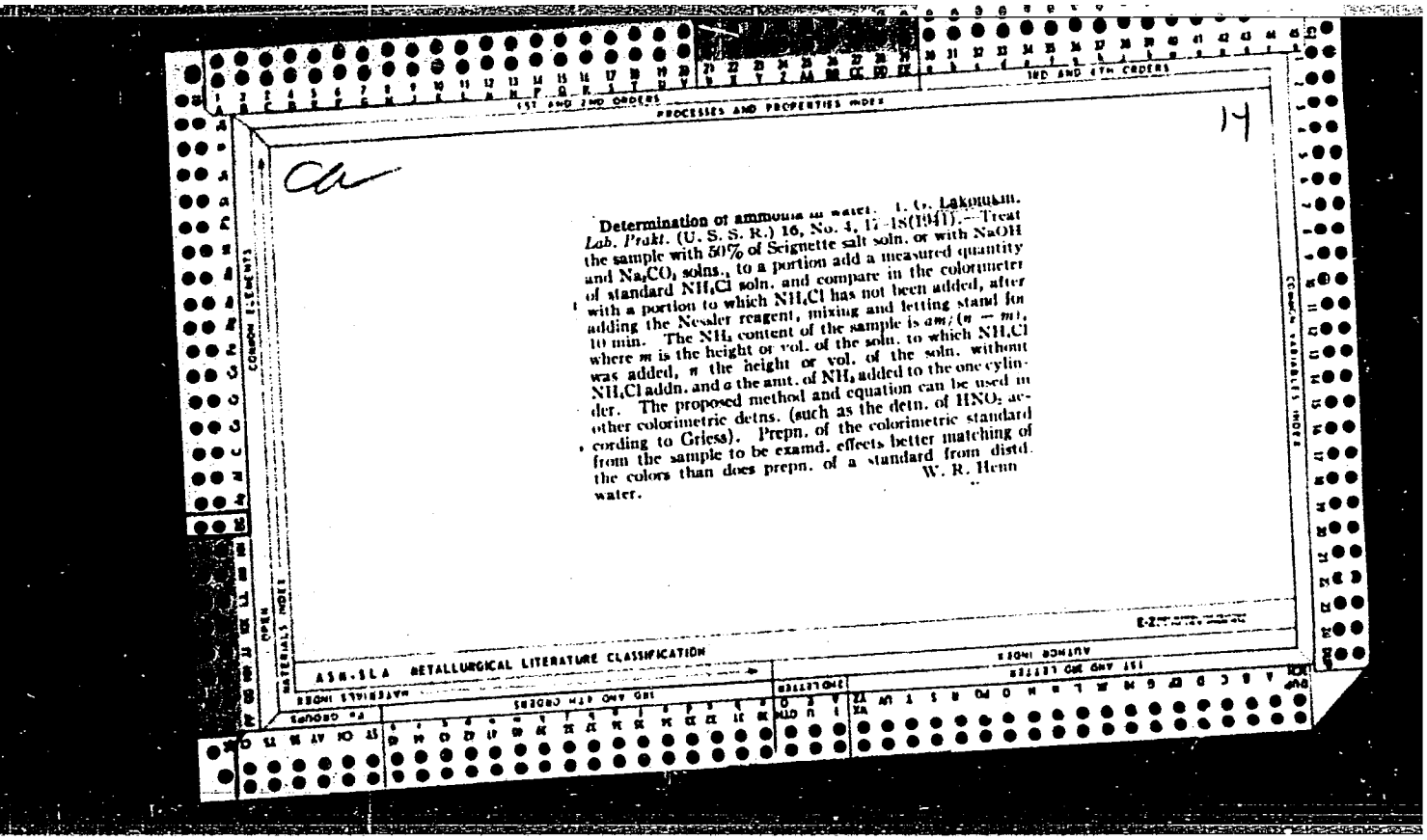
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Catalytic oxidation of propyl alcohol. I. G. Lakoshkin, O. S. Urbanskaya and E. D. Ol'shevskaya. *J. Applied Chem.* (U. S. S. R.) 5, 581–603(1932).—EtCHO is best obtained by passing equimol. quantities of PrOH and H_2O over a Cu-CuO catalyst. The max. yield is obtained with Cu at 400–420° and with CuO at 340°. Slow passage of the vapors through the reaction tube decomps. the EtCHO formed. One of the by-products of the reaction is EtCH:CMeCHO. Pyrocatalytic oxidation of EtCHO to $EtCO_2H$ results in low yields. Oxidation in the liquid phase with O_2 in presence of $EtCO_2Mn$ gives only a 2–3% loss of EtCHO.

V. Kalichevsky





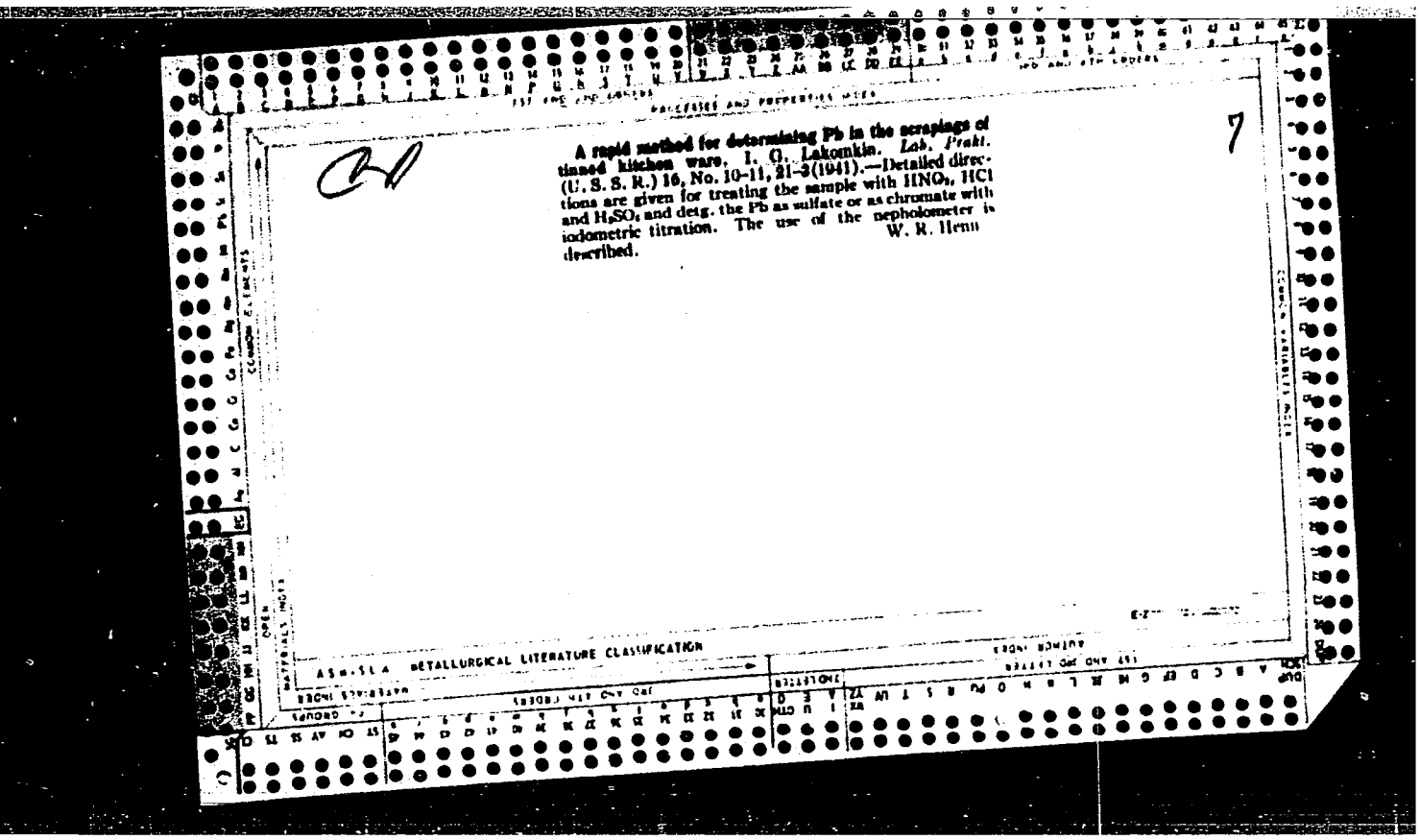
PROCESSES AND PROPERTIES INDEX

14

Determination of ammonia in water. I. G. Lakonkin. *Lab. Prakt.* (U. S. S. R.) 16, No. 4, 17–18(1941).—Treat the sample with 50% of Seignette salt soln. or with NaOH and Na_2CO_3 solns., to a portion add a measured quantity of standard NH_4Cl soln. and compare in the colorimeter with a portion to which NH_4Cl has not been added, after adding the Nessler reagent, mixing and letting stand for 10 min. The NH_3 content of the sample is $am/(n - m)$, where m is the height or vol. of the soln. to which NH_4Cl was added, n the height or vol. of the soln. without NH_4Cl addn. and a the amt. of NH_3 added to the one cylinder. The proposed method and equation can be used in other colorimetric detns. (such as the detn. of HNO_2 according to Griess). Prepn. of the colorimetric standard from the sample to be examd. effects better matching of the colors than does prepn. of a standard from distd. water.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



A rapid method for determining Pb in the scrapings of tinned kitchen ware. I. G. Lakomkin. *Lab. Prakt.* (U. S. S. R.) 16, No. 10–11, 21–3(1941).—Detailed directions are given for treating the sample with HNO_3, HCl and H_2SO_4 and detg. the Pb as sulfate or as chromate with iodometric titration. The use of the nepholometer is described.

W. R. Henn

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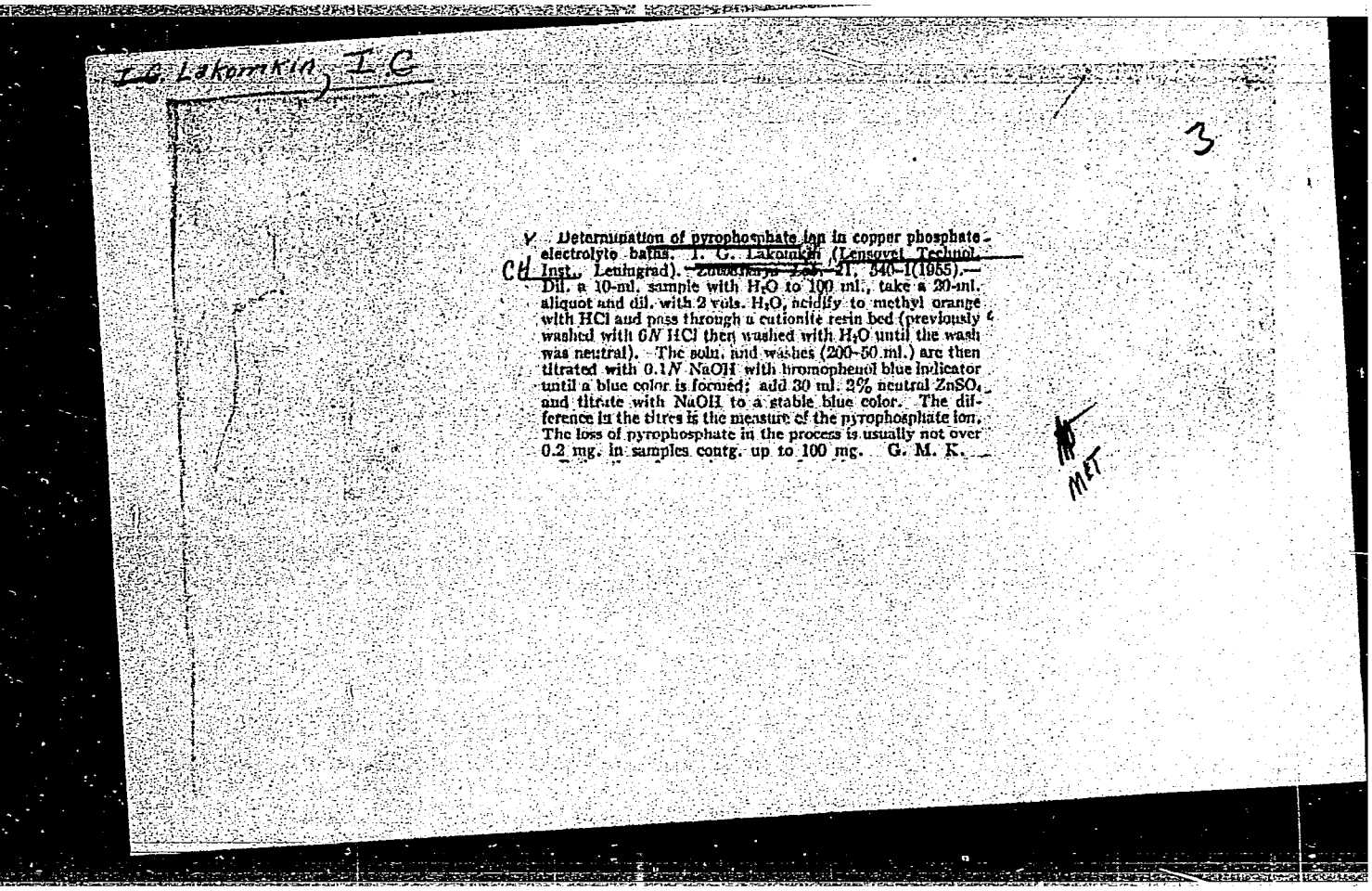
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LAKOMKIN, I. G.

USSR

Separation of phosphoric acid ions from cations of the I, II, and III analytical groups with the aid of an ion exchanger. I. G. Lakomkin. *Trudy Leningrad. Tekhnol. Inst. im.* [illegible] 27, 3-28; *Referat. Zhur., Khim.* 1954, No. 25730.—PO_4^{3-} is sepd. by passing the soln. adjusted to pH <1.5-2 through a column filled with Wolfatite KS or with Ionite SBS, in their H form, followed by washing with H_2O. The adsorbed cations are later displaced by HCl. This method permits the sepn. of a fraction of a mg. of the group II and III cations in the presence of 5000-fold quantity of PO_4^{3-}.

M. Hosch



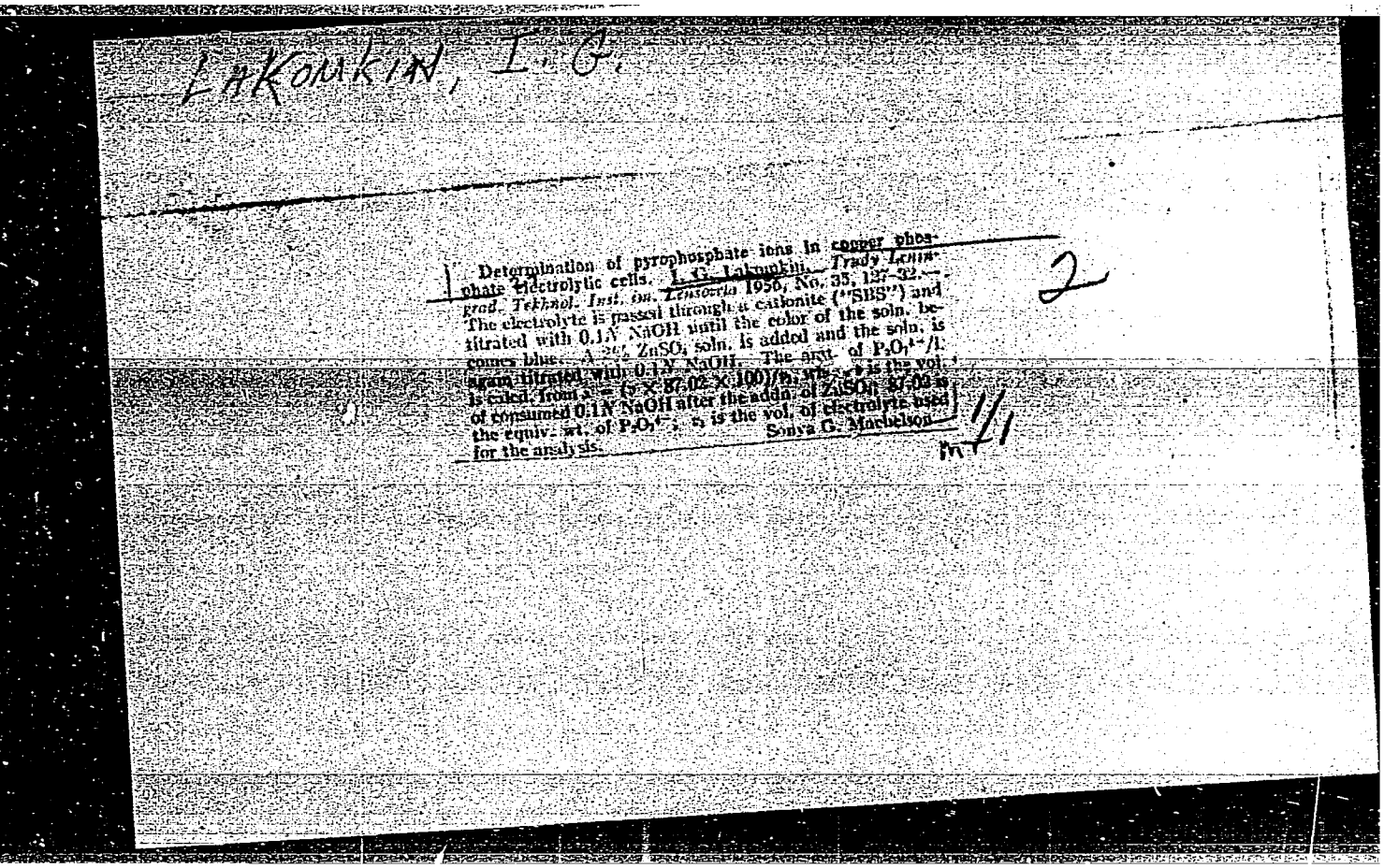
I.G. Lakomkin, I.G.

3

V Determination of pyrophosphate ion in copper phosphate electrolyte baths. I. G. Lakomkin (Lensovet Technol. Inst., Leningrad). Zhurnal Fiz. 21, 340-1(1955).—Dil. a 10-ml. sample with H_2O to 100 ml., take a 20-ml. aliquot and dil. with 2 vols. H_2O, acidify to methyl orange with HCl and pass through a cationite resin bed (previously washed with 6N HCl then washed with H_2O until the wash was neutral). The soln. and washes (200-50 ml.) are then titrated with 0.1N NaOH with bromophenol blue indicator until a blue color is formed; add 30 ml. 2% neutral $ZnSO_4$ and titrate with NaOH to a stable blue color. The difference in the titres is the measure of the pyrophosphate ion. The loss of pyrophosphate in the process is usually not over 0.2 mg. in samples contg. up to 100 mg. G. M. K.

CH

MET



LAKOMKIN, I. G.

Determination of pyrophosphate ions in copper pyrophosphate electrolytic cells. I. G. Lakomkin. *Trudy Leningrad. Tekhnol. Inst. im. Lensoveta* 1956, No. 35, 127–32.—The electrolyte is passed through a cationite ("SBS") and titrated with 0.1 *N* NaOH until the color of the soln. becomes blue. A 2% $ZnSO_4$ soln. is added and the soln. titrated with 0.1 *N* NaOH. The amt. of $P_2O_7^{4-}$/l. is calcd. from $x = (a \times 87.02 \times 100)/b$, where x is the vol. of consumed 0.1 *N* NaOH after the addn. of $ZnSO_4$, 87.02 is the equiv. wt. of $P_2O_7^{4-}$, b is the vol. of electrolyte used for the analysis. Sonya G. Machelson

2

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LAKOMKIN, I.G.

Composition of phosphoric acid salts. Report No.1. Trudy LTI no.48:143-154 '58. (MIRA 15:4)
(Phosphoric acid)

LAKOMKIN, I.G.

Analysis of industrial superphosphate with the aid of ion exchangers.
Trudy LTI no.48:155-160 '58. (MIRA 15:4)
(Phosphates) (Ion exchange)

AUTHOR: Lakomkin, I.G.

32-24-6-6/44

TITLE: A Method of Determining Phosphoric Acid in Superphosphates by Means of Ion Exchange (Metod opredeleniya fosfornoy kisloty v superfosfatakh s pomoshch'yu ionoobmennikov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 6, pp 679-680 (USSR)

ABSTRACT: M.L.Chepelevetskiy, R.Ye.Osherovich and S.M.Pevzner (Ref 1) suggested the application of a cationite in hydrogen form for the purpose of extracting phosphoric acid. As this, however, caused difficulties in works laboratories, the present paper describes extraction with sulfuric acid by the method developed by Blyakher (Ref 2); determination itself is carried out with ion-exchange resins. In principle the method consists in the following: The superphosphate is dissolved in 0.05 n sulfuric acid, is allowed to pass through an H-cationite (SBS), is filtered and is titrated with 0.1 n NaOH besides methylorange and phenolphthalein. For the purpose of determining the total amount of phosphoric acid the sample is dissolved in a 10% hydrochloric acid and passed through a cationite; in order to improve titration and thus also the results obtained, lead nitrate is used. The results

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A Method of Determining Phosphoric Acid in Superphosphates by Means of Ion Exchange

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obtained are given in a table and show that the values obtained are lower than those obtained by the gravimetrical method. In order to bring the results obtained into line with those obtained by the gravimetrical method according to GOST it is necessary to use an empirical titer of the lye of phosphoric acid (isolated from the superphosphate), the P_2O_5-content of which was gravimetrically determined. The process of analysis is described in detail. There are 2 tables, and 2 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

1. Phosphates--Analysis 2. Phosphates--Volumetric analysis 3. Phosphoric acids--Determination 4. Ion exchange resins --Performance 5. Titration--Effectiveness

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LAKOMKIN, I.G.; GOROVOY, G.G.

Composition of salts of phosphoric acid. Part 2: Reaction between Na_2HPO_4 and manganese salts. Izv.vys.ucheb.zav.; khim. i khim.tekh. 3 no.6:975-979 '60. (MIRA 14:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra analiticheskoy khimii.
(Phosphoric acid) (Manganese salts)

LAKOMKIN, I.G.; ALEKSEYEVSKAYA, N.V.

Use of phosphates as ion exchangers. Zhur. neorg. khim. 8 no.7:1781-1784 Jl '63. (MIRA 16:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphates) (Ion exchange)

33156
S/120/61/000/006/027/041
E073/E435

24.6740
AUTHORS: Litvin, V.F., Lakomkin, Yu.A.

TITLE: Double focusing in a wide energy range

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 125

TEXT: The double focusing of particles of a given energy using a homogeneous magnetic field of the sector type can be generalized to apply to the case of the spectrograph. To do this the exit boundary of the homogeneous magnetic field must be given the special form defined by Eq.(1) (Ref.1: V.F.Kitvin, PTE, no.3, 1961, 33). This article presents an approximate solution of this equation using a graphical method and keeping to the notation used in Ref.1. If a family of exit boundaries are drawn for a given ε_1 ($\ell_1 = 1$, and only those parts of the boundaries to the actual focusing are examined) the position of the boundaries changes according to their distance from the point of entrance of the trajectory into the magnetic field. At the centre of the family there is a particular boundary at which the curve changes sign. The greatest part of the optimum boundary can be considered to be a straight line. The working region at the "optimum" boundary

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extends from the smallest energy (corresponding to the actual focusing) up to the maximum energy, corresponding to the actual focusing at the distance permitted by the construction of the instrument. The largest deviation of the "optimum" boundary from the straight takes place at the maximum energy of the working range. To improve the quality of focusing in the upper energy range, it is desirable to shim the exit boundary by the addition of iron to the side of the pole piece. A diagram shows a family of exit boundaries providing double focusing in a wide energy range for $\varepsilon_1 = 50°$. Similar families were also obtained for a number of values of ε_1 in the range $30° \leqslant \varepsilon_1 \leqslant 60°$. In Fig.2, the parameters λ and λ are determined directly by approximating the "optimum" boundary as a function of ε_1. The results of the calculation are correct for extremely small interpolar gaps. For gaps of significant size, the basic inaccuracy in the use of Fig.2 (for the determination of the position of the "optimum" boundary) shows the imperfection of the initial formula of W.G.Cross (Ref.2: Rev. Scient. Instrum. 1951, 22, 717) used to obtain the equation in Ref.1. This problem, taking into account the extension to the

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marginal region of the magnetic field, has been explored further in Ref.3 (Yu. Kholmovskiy, Atomnaya energi, no.9, 1960, 301). Acknowledgments are expressed to Yu.A.Nemilov for his interest in the work. There are 2 figures and 3 references: 2 Soviet-bloc and 1 non-Woviet-bloc. The reference to an English language publication, Ref.2, is quoted in the text.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet
(Leningrad State University)

SUBMITTED: April 1, 1961

Card 3/3

BARABASH-NIKIFOROV, I.I.; LAKOMKINA, O.A.; PETROVA, G.P.

Prolonged keeping of a desman in a cage for experimental purposes. Zool. zhur. 43 no.10:1572-1575 '64.
(MIRA 17:12)

1. State University of Voronezh.

SOV/180-59-2-31/34

AUTHORS: Lakomskaya, G.V., and Sukhodrovskaya, K.A. (Moscow)

TITLE: Contribution on the Acidity of Mineral Coals (K voprosu o kislotnosti iskopayemykh ugley)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 164-167 (USSR)

ABSTRACT: The authors report their work on the study of the pH of coals. The first stage was the development of the method, which has some similarity in principle to that of Jacob (Ref 4). The results for various grades and deposits of coal showed that the pH value can vary over a wide value and is not characteristic of a grade. The pH does not depend on the total ash content, being affected apparently by both the organic and mineral part of the coal. The rate of oxidation of a coal was found to vary with variation in pH and this suggests that the improvement in storage properties obtained by treatment with calcium bicarbonate solution is due to its influence on the pH as well as to its pore-sealing action (Ref 7).

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Contribution of the Acidity of Mineral Coals

The work was carried out under the direction of P.K.Mel'.

There are 2 tables and 7 references, 4 of which are Soviet, 2 German and 1 English.

SUBMITTED: June 28, 1958

Card 2/2

SUKHODROVSKAYA, K.A.; LAKOMSKAYA, G.V.

Significance of coal acidity in determining its content in determining its content of peroxides. Trudy IGI 14:87-90 '60. (MIRA 13:12)

(Coal--Testing) (Oxidation)

FRIDMAN, G. Ye.; SUKHODROVSKAYA, K. A.; LAKOMSKAYA, G. V.; KARAVAYEV, N. M.

Coal carbonization during heating in the presence of water under pressure. Trudy IGI 17:76-87 '62. (MIRA 15:10)

(Coal—Carbonization) (Water vapor)

MALAWSKI, Stefan; LAKOMSKI, Marian

The clinical value of preserved ribs in spine fusion for tuberculosis. Chir. narzad. ruchu ortop. Pol. 30 no.1: 97-102 '65.

1. Z Oddzialu Gruzlicy Kostno-Stawowej dla Doroslych W Swidrze (Ordynator: dr. med. P. Kubica).

LAKOMSKIY, V.I.

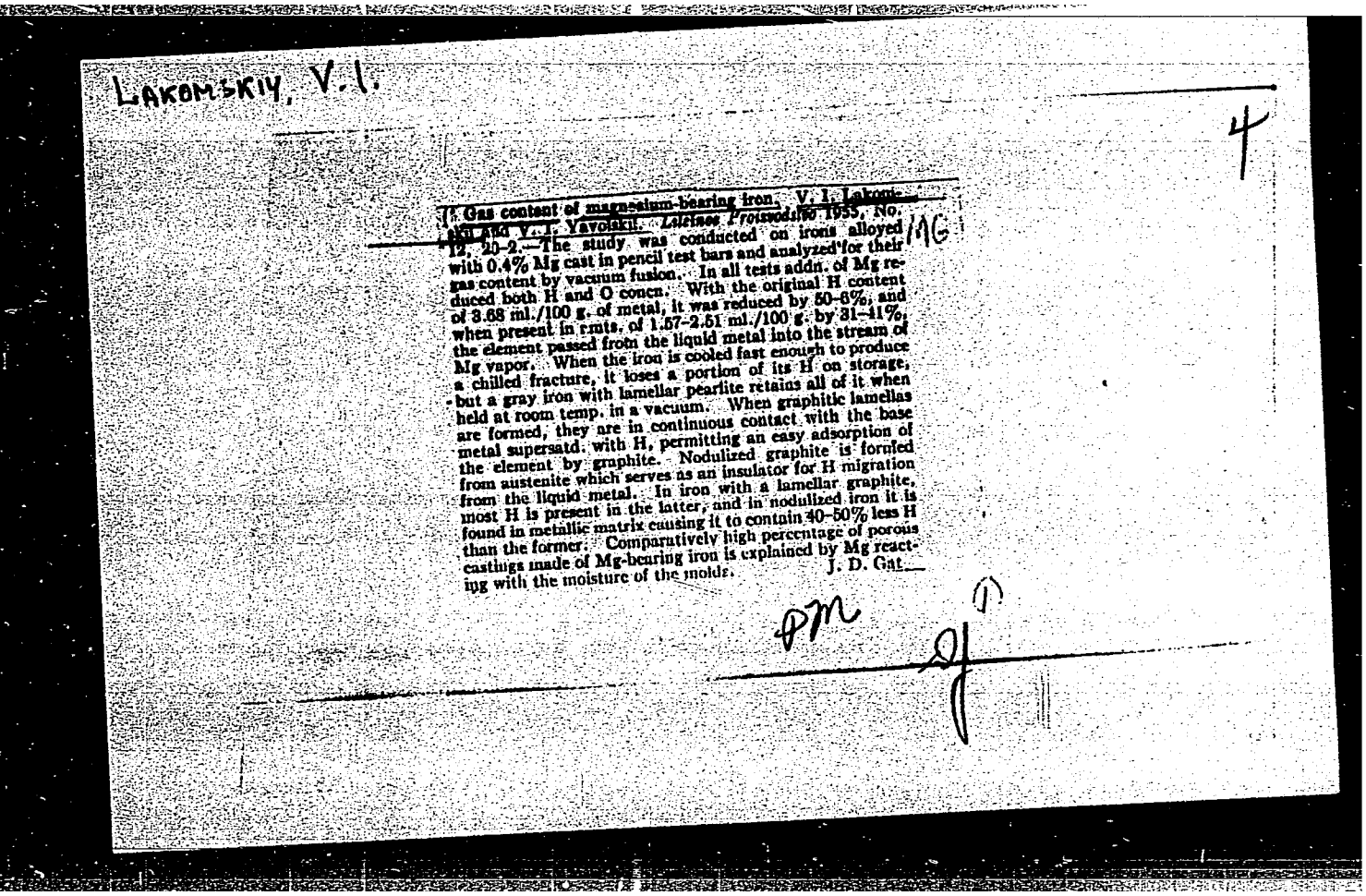
Dissertation: "Study of Hydrogen Solubility in Liquid Cupola Cast Iron and the Behavior of Gases in the Inoculation of Cast Iron."
Cand. Tech Sci, Kiev Polytechnic Inst, Kiev, 1954. (Referativnyy Zhurnal, Khimiya, Moscow, No 15, Aug 54)

SO: SUM 393, 28 Feb 1955

LAKOMSKIY, V. I.

USSR

Solubility of hydrogen in liquid cupola iron. V. I. Lakomskii and V. I. Yavoiskii. *Liteinoe Proizvodstvo* 1954, No. 5, 20–3.—Irons were melted in an evacuated system, molten metals treated with H for reducing reducible oxides, and the system re-evacuated and a given quantity of H_2 admitted under pressure of 20–40 mm. of Hg. Pressure was measured with a McLeod gage every 20–30 sec. The equil. between the gaseous phase and iron was reached usually in 5–6 min. Then the gases of the system were aspirated into the analyzer, their compn. detd., and partial pressure of the equil. calcd. The compn. of Fe could be changed without breaking the vacuum. All samples were melted in a magnesite crucible previously heated to 1700–1750° and treated with H. An iron with C 0.03, Si 0.115, Mn 0.07, S 0.03, P 0.02% dissolves at 1530–40° from 24.5 to 23.5 ml. H/100 g. Cast iron with 2.76–3.8% C dissolved at 1300°, resp., 14.1 and 12.5 ml. H/100 g. showing a sharper decrease of soly. at lower C concn. Temp. increases the soly. of H by 0.5 ml./100 g. for each 100° in the interval of 1275–1420°. Si (1.0–3.0%) added to Fe-C system lowers H soly. at a faster rate at lower concns., shown in diagrams. Mn rapidly evaporates from its alloys with Fe, the vapor pressure of it at 1300–1700° being 1 g. $P = -13280\ T +$ 8.628, though in cast irons 0.18–0.20% Mn remains at 1600–50° held apparently as carbides. In these expts. it was added in increments of 0.1% Mn starting at 1420° and reducing the temp. at each subsequent addn. to avoid vaporization. A matter of 0.3% Mn increases H soly. from 13 to 21 ml./100 g., but the presence of Si changes the trend. No Mn hydrides are apparently formed. A 5–10% drop of soly. was noted on adding 0.07–0.10% Mg as a 10% Mg-Si alloy at 1275°. J. D. Gat



LAKOMSKIY, V.I.

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MG

Gas content of magnesium-bearing iron. V. I. Lakomskiy and V. I. Yavoiskii. *Liteinoe Proizvodstvo* 1955, No. 12, 20-2.—The study was conducted on irons alloyed with 0.4% Mg cast in pencil test bars and analyzed for their gas content by vacuum fusion. In all tests addn. of Mg reduced both H and O concn. With the original H content of 3.68 ml./100 g. of metal, it was reduced by 50-6%, and when present in rmts. of 1.57-2.51 ml./100 g. by 31-41%, the element passed from the liquid metal into the stream of Mg vapor. When the iron is cooled fast enough to produce a chilled fracture, it loses a portion of its H on storage, but a gray iron with lamellar pearlite retains all of it when held at room temp. in a vacuum. When graphitic lamellas are formed, they are in continuous contact with the base metal supersatd. with H, permitting an easy adsorption of the element by graphite. Nodulized graphite is formed from austenite which serves as an insulator for H migration from the liquid metal. In iron with a lamellar graphite, most H is present in the latter, and in nodulized iron it is found in metallic matrix causing it to contain 40-50% less H than the former. Comparatively high percentage of porous castings made of Mg-bearing iron is explained by Mg reacting with the moisture of the molds. J. D. Gat

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LAKOMSKIY, V. I.

Distr: 4E2c 18 18 4

Investigation of the Desulphurization of Cast Iron with Magnesium. V. I. Lakomskii. (*Liteinoe Proizvodstvo*, 1957, (1), 9-11). [In Russian]. In the investigation described 2 kg samples of Armco iron were melted in an induction furnace with FeS to give a melt with 0·08–0·10% S. Radioactive sulphur was then added followed by Mg additions at regular time intervals. Samples of the liquid metal were taken after each addition and their radioactivities were determined. From the results, the relation between the quantity of Mg added to the metal and the quantity of S removed was found: this is shown graphically and the kinetics of the process are discussed. Further information was obtained from analyses of trapped vapours rising during the process.—S. K.

LAKOMS'KIY, V.I.

Methods of selection of samples for the determination of carbon content in iron alloys with high carbon content. Visnyk AN URSR 28 no.5:50-52 My '57. (MLRA 10:7)
(Iron alloys) (Carbon)

SOV-125-58-2-10/11

AUTHOR: Lakomskiy, V.I.

TITLE: Determination of the Hydrogen Content in Titanium by Vacuum Heating (Opredeleniye soderzhaniya vodoroda v titane metodom vakuumnogo nagreva)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 2, pp 81-91 (USSR)

ABSTRACT: Information is presented on a new vacuum heating method of determining the hydrogen content in titanium and its weld joints. Such a method can be put into practice in ordinary work laboratories with the use of a nichrome resistance furnace (Figure 3 and 4), made of "3VS" molybdenum glass. The coefficient of hydrogen diffusion and the optimum temperature of the analyses (800°C) are determined. Comparison of results in determining hydrogen by vacuum-heating and vacuum-melting methods, obtained at the Institute of Electric Welding and at VIAM, showed a satisfactory agreement.
There are 10 graphs, 1 diagram, 1 photo, 4 tables and 10 references, 7 of which are Soviet, 2 English and 1 Polish.

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SOV-125-58-2-10/11

Determination of the Hydrogen Content in Titanium by Vacuum Heating

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona, AN USSR (Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: November 28, 1957

1. Hydrogen--Determination 2. Titanium--Chemical analysis

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SOV/125-58-11-3/16

AUTHORS: Makara, A.M., Lakomskiy, V.I., Zhovnitskiy, I.P.

TITLE: An Investigation on the Distribution of Hydrogen in Weld Joints of Medium Alloy Steels with Austenite and Ferrite Seams (Issledovaniye raspredeleniya vodoroda v svarnykh soyedineniyakh srednelegirovannykh staley s austenitnym i ferritnym shvami)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 11, pp 16-31 (USSR)

ABSTRACT: As contradictory opinions exist between data (Ref. 4,5) and the general opinion on hydrogen diffusion in metals, changes of hydrogen content in characteristic points of weld joints near the seam and near the base metal were investigated. Information is presented on methods to determine the hydrogen content in different zones of austenite and ferrite seams. Results of tests are compared with data obtained by computation. It was stated that in medium alloy steels, the hydrogen content increases sharply on the side adjacent to the seam, and in austenitic welds, on the side of the base metal. It is proved that the hydrogen content in zones adjacent to austenitic seams is higher than in zones of ferrite seams. The ob-

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